

**Notice of Allowability**

Application No.

09/749,388

Examiner

Callie E. Shosho

Applicant(s)

HIDAKA ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 12/23/04.
2. ☒ The allowed claim(s) is/are 1-3,5-10,12,13,16-18 and 21.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

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**Statement of Reasons for Allowance**

1. In the office action mailed 11/2/04, claims 1-2, 5-10, 12-13, 16-18, and 21 were indicated as allowed while claims 3 and 23 were rejected under 35 USC 112, second paragraph.

Applicants' amendment filed 12/23/04 overcomes the 35 USC 112 second paragraph rejections of record by amending claim 3 and canceling claim 23.

Thus, the present claims are allowable over the "closest" prior art Anton et al. (U.S. 6,005,023) and Ma et al. (U.S. 6,117,921) for the following reasons:

Anton et al. disclose water-based ink comprising colorant and graft copolymer having polymeric backbone and macromonomer side chain. The side chain, corresponding to presently claimed acrylic polymer side chain (P), is obtained from 50-80% by weight methyl methacrylate which is identical to monomer of presently claimed formula (1) and 20-50% methacrylic acid corresponding to presently claimed salt-forming group (Q). However, there is no disclosure or suggestion in Anton et al. of graft copolymer comprising acrylic polymer side chain (P) and 10-35% by weight nonionic side chain (R) as required in all the present claims. There is no disclosure in Anton et al. that the graft copolymer comprises nonionic side chain as presently claimed.

Ma et al. disclose water-based ink jet ink comprising colorant and graft copolymer having backbone portion and side chain portion wherein either the backbone or the side chain is hydrophobic and the other is hydrophilic. The hydrophilic portion is obtained from 2-100% by weight ionizable monomer such as (meth)acrylic acid as well as co-monomers including nonionic hydrophilic monomer of the formula  $\text{CH}_2=\text{C}(\text{R}_3)\text{C}(\text{O})\text{O}(\text{CH}_2\text{CH}_2)_m\text{R}_4$  where  $\text{R}_3$  is

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hydrogen or CH<sub>3</sub>, R<sub>4</sub> is hydrogen or C<sub>1</sub>-C<sub>4</sub> alkyl, and m is 1-100. While the hydrophilic portion may contain monomers identical to monomer of presently claimed formula (1), there is no disclosure or suggestion in Ma et al. that these monomers are present in the hydrophilic portion in amount of not less than 60% by weight as required in all the present claims. Further, it is required that the hydrophobic portion is obtained from at least 50% by weight monomers containing aryl group, i.e. aryl esters of (meth)acrylic acid. While the hydrophobic portion may also contain monomers identical to monomer of presently claimed formula (1), there is no disclosure or suggestion in Ma et al. that these monomers are present in the hydrophobic portion in amount of not less than 60% by weight as required in all the present claims. Additionally, it is noted that on the one hand, Ma et al. disclose graft copolymer comprising hydrophobic backbone and hydrophilic side chain obtained from monomers including nonionic hydrophilic monomers. However, there is no disclosure that this graft copolymer also comprises acrylic polymer side chain consisting essentially of at least one monomer of presently claimed formula (1) in amount of not less than 60% by weight as presently claimed and thus, no disclosure of graft copolymer comprising acrylic polymer side chain (P) and 10-35% by weight nonionic polymer side chain (R) as required in all the present claims. On the other hand, Ma et al. disclose graft copolymer comprising hydrophilic backbone and hydrophobic side chain corresponding to presently claimed acrylic polymer side chain (P) which is obtained from monomers identical to those of presently claimed formula (1). However, there is no disclosure in Ma et al. that these monomers are present in the side chain in amount of not less than 60% by weight as required in all the present claims. Further, there is no disclosure that this graft copolymer also comprises 10-35% by weight nonionic polymer side chain and thus, no disclosure of graft copolymer comprising

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acrylic polymer side chain (P) and 10-35% by weight nonionic polymer side chain (R) as required in all the present claims.

Thus, it is clear that Anton et al. or Ma et al., either alone or in combination, do not disclose or suggest the present invention.

In light of the above, the present claims are passed to issue.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Callie E. Shosho  
Primary Examiner  
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3/17/05